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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/625,902	07/24/2003	Hideyuki Otake	OKI.556	1200
20987	7590	04/13/2005	EXAMINER	
VOLENTINE FRANCO, & WHITT PLLC ONE FREEDOM SQUARE 11951 FREEDOM DRIVE SUITE 1260 RESTON, VA 20190			JEANGLAUDE, JEAN BRUNER	
			ART UNIT	PAPER NUMBER
			2819	

DATE MAILED: 04/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/625,902

Applicant(s)

OTAKE, HIDEYUKI

Examiner

Jean B. Jeanglaude

Art Unit

2819

**– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –
Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☒ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-21 is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities: it is suggested to substitute "resister" or "resisters" throughout the specification by "resistor" or "resistors".

Appropriate correction is required.

Claim Objection

2. Claims 1, 8, 15 are objected to because of the following informalities: it is suggested to substitute "resisters" in these claims by -- resistors--.
3. Appropriate correction is required.

Allowable Subject Matter

Claims 1 – 21 are allowable.

Reasons for allowing these claims will be provided in the next office action.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
5. Hauviller et al. (US Patent Number 4,918,448) discloses a device for extending the resolution of a N-bit resistive DAC to a (N+P)-bit DAC.
6. Ikeda (US Patent Number 4,973,979) discloses a circuit and method for converting digital signal into corresponding analog signal.
7. McPartland (US Patent Number 5,604,501) discloses a DAC with reduced number of resistors.

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8. Morlon (US Patent Number 5,111,205) discloses a DAC and analog-to-digital converters.
9. Segawa et al. (US Patent Number 5,523,721) discloses a digitally controlled variable gain circuit.
10. Rivoir et al. (US Patent Number 5,703,588) discloses a DAC with dual resistor string.
11. Gross, Jr. et al. (US Patent Number 5,731,775) discloses a subranging converter with plurality of resistor strings and transistor switches.
12. Walden et al. (US Patent Number 5,841,382) discloses a fast testing of DACs.
13. Dempsey et al. (US Patent Number 5,969,657) discloses a DAC.
14. Connell et al. (US Patent Number 5,999,115) discloses a segmented using PMOS and NMOS switches for improved span.
15. Suzuki et al. (US Patent Number 6,157,335) discloses a voltage generating circuit.
16. Leung et al. (US Patent Number 6,400,300) discloses a DAC street effect compensation.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jean B. Jeanglaude whose telephone number is 571-272-1804. The examiner can normally be reached on Monday - Friday 7:30 A. M. - 5:00 P.M..

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Tokar can be reached on 571-272-1812. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jean Bruner Jeanglaude
Primary Examiner
April 5, 2005